

DOCUMENT 25/2

**Questions relating to Order/Class Group nomenclature in the Class
Echinoidea**

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(Enclosure to a letter dated 4th January 1957)¹

Editorial Note: What was substantially the same paper as that here reproduced was published by the present authors under the title "A Classification of Echinoids" in January 1957 (*J. Palaeont.* 31 (No. 1) : 242-272). The paper as here reproduced differs from that already published by the authors in that they have (a) corrected one erroneous date (that for Echinideae Claus), (b) added seventeen names previously omitted and (c) have changed the treatment accorded to twenty other names. Particulars of the changes so made were communicated to the Office of the Commission by Mr. Melville on behalf of his co-author and himself in a letter dated 20th November 1957. The revisions so made by the authors affect their conclusions as set out on pages 267-270 of the paper referred to only in that the Order name *Stereosomata* Duncan, 1889, is now made a junior objective synonym of *Echinideae* Claus, 1880, and is not regarded as an available name. (Intl'd 23rd January 1958. F.H.)

In considering the names to be used in the *Treatise of Invertebrate Paleontology* for taxa in the Order/Class-group in the Echinoidea, the writers compiled as complete a list as possible of the relevant names. These lists were then considered in the light of the decisions of the Fourteenth International Congress of Zoology, Copenhagen, 1953, relating to names in the Order/Class-group (*Copenhagen Decisions zool. Nomencl.*, 1953, Decisions 59-69, pp. 38-43).

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The Decisions referred to envisaged the setting-up of committees of specialists in each group to consider Order/Class-group nomenclature. Since no committee is yet in being to review the subject so far as the Class Echinoidea is concerned, it seems best to us to publish the lists that we have compiled in the *Bulletin of Zoological Nomenclature*, so that other specialists can criticize our conclusions and supplement our lists prior to the establishment of an *Official List of Names in the Order/Class-group* in Echinoidea. We are grateful to the Secretary of the International Commission on Zoological Nomenclature for his support and for the opportunity he gives us of getting our difficulties more widely discussed. We therefore state the terms of reference that we have adopted and set forth the problems that we have met, and append the lists of names.

2. Our lists exclude all names that have been proposed in the vernacular and all those consisting of more than one word, even if correctly latinized. They include only latinized names referred to recognized categories (Suborder, Order, Superorder, Subclass, Class) and latinized names not formally categorized but readily recognizable as equivalent to names in the recognised categories, as well as names qualified by unaccepted terms such as "Grade" or "Tribe".

3. All names in the Order/Class-group have been treated as nomenclaturally co-ordinate to a limited extent; that is, a name introduced for a taxon at one level in the group is regarded as available with its original authorship and priority at all other levels in the group (with appropriate change of termination). We find, however, that to adopt the corollary of nominate sub-taxa would lead to the loss of well-established names. We have assumed that a nominal genus selected as type-genus of a nominal taxon at any level in the Order/Class-group must *ipso facto* be type-genus of a taxon at every lower level in the group, as well as of taxa at every level in the Family-group. This procedure seems to us a logical extension of Article 29.

4. Some familiar Order/Class-group names in the Echinoidea were first proposed in the Family-group, but have since become attached to taxa in the Order/Class-group. For instance, the names Regularia and Irregularia were first used by Latreille, 1825, as Subfamily-names; they were first applied to taxa in the Order/Class-group by Carus (1863) and have been used by later authors (including Mortensen, 1935) as Subclass-names with attribution to Latreille. Again, the familiar Order-name Clypeasteroida has generally been attributed to L. Agassiz, 1836, although his original name was in the vernacular ("les Clypéastres") without any category-name. We give both these sorts of names priority only from their first usage in latinized form for taxa in the Order/Class-group. Historically, the Phylum Echinodermata was for long regarded as a Class (by one author until at least 1857) and the Class Echinoidea as an Order, so that names in the Order/Class-group are generally of later origin than names in the Family-group as such.

5. We have extended Article 34 (the Law of Homonymy) in a strict sense in that we have considered only the first use of each word ; but we have not regarded a difference in termination as creating a condition of homonymy. In this we disagree with *Copenhagen Decisions* paragraph 68(1) because we feel that it is better to use the terminations now generally standardized in the Echinoidea and to dispose of similar words with different terminations by means of objective synonymy. Only identical words have been treated as homonyms.

6. The majority of Order/Class-group names in the Echinoidca have been formed from the name of an included genus, partly because many of them were first proposed as Family-names. This fact has an obvious influence on the selection of the type-genus. There are also names formed from the names of what we consider marginal genera or *nomina dubia* (see *Copenhagen Decisions* para. 62(3)(a) ; names formed from generic names modified by the addition of a prefix ; and names formed from the name of a morphological character thought to indicate relationship between the forms endowed with it. Names of this last kind are relatively few and have generally been short-lived in practice. It will probably be found that in each major taxon, Order/Class-group names will tend more and more to have been formed in accordance with a single principle—in the Phylum Arthropoda, for instance, names formed from the names of morphological characters are obviously prevalent in current usage. We suggest that the International Commission might recommend that, in future, new Order/Class-group names should be formed in accordance with the principle prevailing in the taxon in question. We regard this not as a restriction of taxonomic freedom, but as an extension of the power of control over the mode of formation of names in the Family-group already embodied in Article 4.

7. Following *Copenhagen Decisions* paragraph 62(4) we have tried to provide an available name for every currently-recognised taxon. We seek clarification of the question whether this paragraph means that every accepted nominal taxon must have a different type-genus. If two mutually exclusive nominal taxa exist at the same level, we see no objection to their having the same type-genus. For example, the Class Echinoidea is currently divided into two Subclasses in two different ways. Mortensen (1935) recognizes the Subclasses Regularia and Irregularia ; Durham and Melville (1957) recognize the Subclasses Perischoechinoidea and Euechinoidea. These four names, with type-genera as chosen by us, are :—

Perischoechinoidea McCoy, 1849—*Palaechinus* McCoy, 1844

Euechinoidea Brønn, 1860—*Echinus* Linnaeus, 1758

Regularia Carus, 1863—*Echinus* Linnaeus, 1758

Irregularia Carus, 1863*—*Spatangus* Leske, 1778

* It will be seen from the lists of names below that we regard the names Regularia and Irregularia as objective junior synonyms of Endocyclica Brønn, 1860 and Exocyclica Brønn, 1860, respectively.

We hope that our selection of the nominal genus *Echinus* Linnaeus, 1758, as type-genus both of Euechinoidea Bronn, 1860 and of Regularia Carus, 1863 will meet with the approval of our colleagues. Since it is inconceivable that any taxonomic scheme would use both Euechinoidea and Regularia as Subclass-names, we see no objection to a state of objective synonymy existing between them. Any scheme that used both names would apply them to taxa at different levels. This objective synonymy is in effect inevitable if we have correctly applied the meaning of Article 29 in Paragraph 3 above.

8. It is not clear from *Copenhagen Decisions* paragraph 62(3)(b) what is to be done with unwanted names that become objective senior synonyms of names that are to be added to the *Official Lists*. We favour, as the least equivocal course, the use of the Plenary Powers to suppress these names.

9. We have extended Article 30(e)(α) in assuming that the type-genus of a nominal taxon in the Order/Class-group must be selected from among the genera explicitly included in the taxon by the author of the name at the time when he first proposed it. If this is rigidly construed, then two names in the Echinoidea will have to be preserved although they serve no useful taxonomic purpose and were from the beginning subjective junior synonyms of existing names. The nominal Order Nodostomata Lambert, 1915 has as type by monotypy the nominal genus *Amblypygus* L. Agassiz, 1840 (the only nominal genus mentioned in connection with the name Nodostomata when this was first proposed). *Amblypygus* is subjectively a member of the Order Cassiduloida Claus, 1880 (as interpreted by Mortensen, 1948). The name Nodostomata is proposed by Lambert in a more or less casual manner in a discussion of the differences between *Amblypygus* and *Echinoneus* Leske, 1778, which is subjectively a member of the Order Holoctypoida Duncan, 1889, but for which Lambert (1915) proposed the Suborder-name Globatoroida in a similarly casual manner. When next used (Lambert, 1918), the nominal Order Nodostomata included two Suborders, Procassiduloida Lambert, 1918 and Spatangoida; the former contains, among others, the nominal genera *Amblypygus* and *Procassidulus* Lambert and Thiéry, 1918. This latter name was proposed as a substitute name for *Cassidulus* Lamarck, 1801, which was held to be invalid as a homonym of *Cassidula* Humphrey, 1797. Apart from the fact that there is not a true condition of homonymy in this case, the work in which the name *Cassidula* was published (the anonymous *Museum Calonnianum*) was ruled as not available for nomenclatorial purposes in *Opinion 51*. The type-species of *Cassidulus* is *C. cariboearam* Lamarck, 1801, and under Article 30(f) and *Declaration 27* this must also be the type-species of *Procassidulus*, in spite of the original designation of *Echinites lapiscancri* Leske, 1778. The most satisfactory course would be to use the Plenary Powers to designate the nominal genus *Cassidulus* Lamarck, 1801, as type-genus both of the nominal Suborder Procassiduloida Lambert, 1918, and of the nominal Order Nodostomata Lambert, 1915; if our selection of *Cassidulus* as type-genus of the nominal Order Cassiduloida is upheld, then both Procassiduloida and

Nodostomata will become objective junior synonyms of Cassiduloida. Another generic name will then have to be found for the group of species of which *Echinites lapiscancri* Leske, 1778, is one. Again in 1918, the nominal Suborder Globatoroidea includes the nominal genus *Globator* L. Agassiz, 1840, which was presumably the source of the Order-group name. *Globator* is regarded by many specialists as a *nomen dubium*, possibly a subjective junior synonym of the nominal genus *Pyrina* Desmoulins, 1835. If *Globator* can be ruled type-genus of Globatoroidea, then both the generic name and the Order-group name can be dealt with under the procedure laid down for *nomina dubia* in *Copenhagen Decisions*, paragraph 26.

Chronological list of names in the Order/Class-group in Echinoidea

Echinodermata Leske, 1778. Used as an unnamed category (above Order) for all echinoids, but not apparently including any other Echinoderms. The name is now used as the name of a Phylum and we do not propose to consider it in the Order/Class-group.

Echinus Leske, 1778. Listed as an Order. *Echinus* Linnaeus, 1758. Although Leske's name is homonymous with the name of the type-genus, it is clear that he adopted it as the name of a Linnean Order to include all echinoids in a sense quite distinct from his (and Linnaeus's) use of the generic name. We propose to adopt it, in the form Echinoidea, as the Class-name.

Catocysti Leske, 1778. Proposed as a "Class" below Order. *Echinocyamus* Van Phelsum, 1774. Subjective senior synonym of Clypeastridae A. Agassiz, 1873.

Pleurocysti Leske, 1778. Proposed as a "Class" below Order. *Spatangus* Leske, 1778. Objective senior synonym of Spatangidea Claus, 1876.

Echinodermata Wad, 1803. Proposed as a second-rank category under "Class Zoophyta". See *Echinodermata* Leske, 1778.

Anocysti Parkinson, 1811. Proposed as a "Class" below Order. *Cidaris* Leske, 1778. Objective senior synonym of Cidarideae Claus, 1880.

Catocysti Parkinson, 1811. Proposed as a "grand division" below Order. *Echinocyamus* Van Phelsum, 1774. See *Catocysti* Leske, 1778.

Pleurocysti Parkinson, 1811. Proposed as a "Class" below Order. *Spatangus* Leske, 1778. See *Pleurocysti* Leske, 1778.

Echinodermia Rafinesque, 1815. Proposed as a Suborder. See *Echinodermata* Leske, 1778.

Radiaria Rafinesque, 1815. This name represents a taxonomic concept (that all animals possessing radial symmetry are directly related) which no longer claims any acceptance. It is suggested that specialists in the groups concerned should jointly petition the International Commission for its suppression.

Echini Goldfuss, 1820. Proposed as an Order. *Echinus* Linnaeus, 1758. Objective junior synonym of *Echinus* Leske, 1778.

Echinida Fleming, 1822. Proposed as a "Tribe" under "Order I" which was not named. *Echinus* Linnaeus, 1758. Objective junior synonym of *Echinus* Leske, 1778.

Emesostomi Parkinson, 1822. Proposed as a first-rank category (unnamed) below Order. *Cidaris* Leske, 1778. Objective senior synonym of Cidarideae Claus, 1880.

Apomesostomi Parkinson, 1822. Proposed as a first-rank category (unnamed) below Order. *Spatangus* Leske, 1778. Objective senior synonym of Spatangidea Claus, 1876.

Echinata Fischer von Waldheim, 1823. Proposed as an Order. *Echinus* Linnaeus, 1758. Objective junior synonym of *Echinus* Leske, 1778.

Echinoderma Latreille, 1825. Proposed as a Class. See Echinodermata Leske, 1778.

Echinoida Latreille, 1825. Proposed as an Order. *Echinus* Linnaeus, 1758. Objective junior synonym of *Echinus* Leske, 1778.

Echinides Stark, 1828. Proposed as a "Section" under Class Echinodermata. *Echinus* Linnaeus, 1758. Objective junior synonym of *Echinus* Leske, 1778.

Echinidae Fleming, 1828. Unnamed second-rank category below Order, but including all echinoids. *Echinus* Linnaeus, 1758. Objective junior synonym of *Echinus* Leske, 1778.

Anocysti Fleming, 1828. Proposed as a third-rank category (unnamed) below Order. *Cidaris* Leske, 1778. Objective senior synonym of Cidarideae Claus, 1880.

Catocysti Fleming, 1828. Proposed as a third-rank category (unnamed) below Order. *Echinocymus* Van Phelsum, 1774. See Catocysti, Leske, 1778.

Pleurocysti Fleming, 1828. Proposed as a third-rank category (unnamed) below Order. *Spatangus* Leske, 1778. See Pleurocysti Leske, 1778.

Echinidea Blainville, 1834. Proposed as an Order. *Echinus* Linnaeus, 1758. Objective junior synonym of *Echinus* Leske, 1778.

Pedicellata Griffith and Pidgeon, 1834. Proposed as an Order, to include both the Echinoidea and Asterozoa of current usage. This name should be transferred for consideration in the Phylum-group, as representing a Subphylum.

Cirrhi-Spinigrada Forbes, 1841. Proposed as an Order. *Echinus* Linnaeus, 1758. Objective junior synonym of *Echinus* Leske, 1778.

Adelostella T. and T. Austin, 1842. Proposed as a Class. *Echinus* Linnaeus, 1758. Objective junior synonym of *Echinus* Leske, 1778.

Columnidae T. and T. Austin, 1842. Proposed as an Order. This originally included echinoids, crinoids, cystoids and blastoids and does not represent any useful taxonomic concept. In addition, it is a potential homonym of a Family-name in Gastropoda for the genus *Columna* Perry, 1811. Columnidae T. and T. Austin should be suppressed.

Echinidae T. and T. Austin, 1842. Described as an Order. *Echinus* Linnaeus, 1758. Objective senior synonym of Euechinoidea Bronn, 1860.

Perischoechinida McCoy, 1849. Described as an Order. *Palaechinus* McCoy, 1844. To be added to *Official List* as Subclass-name Perischoechinoidea.

Echinoidea d'Orbigny, 1852 and all subsequent usages. Proposed as an Order. *Echinus* Linnaeus, 1758. Objective junior synonym of *Echinus* Leske, 1778. This is the first use known to us of exactly this spelling (i.e. that currently used for the Class-name) for a taxon in the Order/Class-group including all Echinoids.

Perischoechinoidea Bronn, 1860. Proposed as an Order. *Palaechinus* McCoy, 1844. Objective junior synonym of Perischoechinida McCoy, 1849.

Euechinoidea Bronn, 1860. Proposed as an Order. *Echinus* Linnaeus, 1758. To be added to *Official List* as a Subclass-name.

Endocyclica Bronn, 1860. Proposed as a Suborder. *Echinus* Linnaeus, 1758. to be added to *Official List* as Subclass-name. This, with the following name, are the first latinized names known to us which represent the taxonomic concept usually expressed by the terms "Regularia" and "Irregularia".

Exocyclica Bronn, 1860. Proposed as a Suborder. *Spatangus* Leske, 1778. To be added to *Official List* as Subclass-name.

Typica Carus, 1863. Proposed as a first-rank category (unnamed) below Class. *Echinus* Linnaeus, 1758. Objective junior synonym of Euechinoidea Bronn, 1860.

Regularia Carus, 1863. Proposed as a second-rank category (unnamed) below Class. *Echinus* Linnaeus, 1758. Objective junior synonym of Endocyclica Bronn, 1860.

Irregularia Carus, 1863. Proposed as a second-rank category (unnamed) below Class. *Spatangus* Leske, 1778. Objective junior synonym of Exocyclica Bronn, 1860.

Palechinida Haeckel, 1866. Proposed as a Subclass. *Palaechinus* McCoy, 1844. To be added to *Official List* as Order Palaechinoida.

Autechinida Haeckel, 1866. Proposed as a Subclass. *Echinus* Linnaeus, 1758. Objective junior synonym of Euechinoidea Bronn, 1860.

Melonitida Haeckel, 1866. Proposed as an Order. *Melonites* Norwood and Owen, 1846 (*non* Lamarck, 1822), replaced by *Melonechinus* Meek and Worthen, 1860. Since this name was formed from the name of an invalid generic homonym, it would be best considered stillborn. Since there are not as yet any rules that state that this must be the case, the best alternative is to suppress the name on the grounds that it has never been re-employed and is not used in any existing taxonomic scheme.

Eocidarida Haeckel, 1866. Proposed as an Order. *Palaechinus* McCoy, 1844. Objective junior synonym of Palechinida Haeckel (of which it was originally only a part).

Desmosticha Haeckel, 1866 and all subsequent usages. Proposed as an Order. *Echinus* Linnaeus, 1758. Objective junior synonym of Endocyclica Bronn, 1860.

Petalosticha Haeckel, 1866, and all subsequent usages. Proposed as an Order. *Spatangus* Leske, 1778. Objective junior synonym of Exocyclica Bronn, 1860.

Clypeastridae A. Agassiz, 1873. Proposed as a Suborder. *Clypeaster* Lamarck, 1801. To be added to *Official List* as Order Clypeasteroida. As explained elsewhere (Durham, 1955), the alteration of the stem of this name by the insertion of an e is considered a valid emendation on etymological grounds and in order to conform with all other names of the stem of which the Greek word *ἀστήρ* forms a part.

Clypeastridea Claus, 1876. Proposed as an Order. *Clypeaster* Lamarck, 1801. Objective junior synonym of Clypeastridae A. Agassiz, 1873.

Spatangidea Claus, 1876. Proposed as an Order. *Spatangus* Leske, 1778. To be added to *Official List* as Order Spatangoida.

Palechinoidea Zittel, 1879 and all subsequent usages. Proposed as a Subclass. *Palaechinus* McCoy, 1844. Objective junior synonym of Perischoechinida McCoy, 1849.

Cystocidaridae Zittel, 1879. Proposed as an Order. *Cystocidaris* Zittel, 1879, an unnecessary nom. nov. for *Echinocystites* Wyville Thomson, 1861. The ordinal name is an objective senior synonym of Echinocystoida Jackson, 1912.

Bothriocidaridae Zittel, 1879. Proposed as an Order. *Bothriocidaris* Eichwald, 1869. To be added to *Official List* as Order Bothriocidaroida. This name is sometimes attributed to Schmidt, (F.), 1874, but he did not name the taxon, although he recognized the taxonomic need for one.

Perischoechinidae Zittel, 1879. Proposed as an Order. *Palaechinus* McCoy, 1844. Objective junior synonym of Palechinida Haeckel, 1866.

Regulares Zittel, 1879. Proposed as an Order. *Echinus* Linnaeus, 1758. Objective junior synonym of Endocyclica Bronn, 1860. Zittel gives "Endocyclica Wright" as an alternative name; this presumably refers to Echinoidea Endocyclica Wright, 1857, which is excluded from this list because it consists of more than one word.

Irregulares Zittel, 1879. Proposed as an Order. *Spatangus* Leske, 1778. Objective junior synonym of Exocyclica Bronn, 1860. Zittel's reference to "Exocyclica Wright" is ignored on the same grounds as are stated in the preceding entry.

Gnathostomata Zittel, 1879. Proposed as a Suborder. *Clypeaster* Lamarck, 1801. To be added to *Official List* as a Superorder.

Atelostomata Zittel, 1879. Proposed as a Suborder. *Spatangus* Leske, 1778. To be added to *Official List* as a Superorder.

Echinothurideae Claus, 1880. Proposed as a Suborder. *Echinothuria* Woodward, 1863. To be added to *Official List* as Order Echinothurioida.

Cidaridae Claus, 1880. Proposed as a Suborder. *Cidaris* Leske, 1778. To be added to *Official List* as Order Cidaroida.

Echinideae Claus, 1880. Proposed as a Suborder. *Echinus* Linnaeus, 1758. To be added to *Official List* as Order Echinoida (the nominate Order of *Echinus* Leske, 1778).

Clypeastroideae Claus, 1880. Proposed as an Order. *Clypeaster* Lamarck, 1801. Objective junior synonym of Clypeastridae A. Agassiz, 1873.

Spatangoideae Claus, 1880. Proposed as an Order. *Spatangus* Leske, 1778. Objective junior synonym of Spatangidea Claus, 1876.

Cassidulidae Claus, 1880. Proposed as a Suborder. *Cassidulus* Lamarck, 1801. To be added to *Official List* as Order Cassiduloida.

Spatangidae Claus, 1880. Proposed as a Suborder. *Spatangus* Leske, 1778. To be added to *Official List* as Suborder Spatangina.

Abranchiata Ludwig, 1882. Proposed as an Order. *Cidaris* Leske, 1778. Objective junior synonym of Cedaridae Claus, 1880.

Branchiata Ludwig, 1882. Proposed as an Order. *Echinus* Linnaeus, 1758. Objective junior synonym of Echinideae Claus, 1880.

Cidaridea Claus, 1883. Proposed as an Order. *Cidaris* Leske, 1778. Objective junior synonym of Cidarideae Claus, 1880.

Entobranchiata Ludwig, 1886. Proposed as a Suborder. *Cidaris* Leske, 1778. Objective junior synonym of Cidarideae Claus, 1880.

Ectobranchiata Ludwig, 1886. Proposed as a Suborder. *Echinus* Linnaeus, 1758. Objective junior synonym of Echinideae Claus, 1880.

Clypeastroidea Ludwig, 1886. Proposed as an Order. *Clypeaster* Lamarck, 1801. Objective junior synonym of Clypeastridae L. Agassiz, 1873.

Spatangoidea Ludwig, 1886. Proposed as an Order. *Spatangus* Leske, 1778. Objective junior synonym of Spatangidea Claus, 1876.

Bothriocidaroida Duncan, 1889. Proposed as an Order. *Bothriocidaris* Eichwald, 1859. Objective junior synonym of Bothriocidaridae Zittel, 1879.

Cidaroida Duncan, 1889. Proposed as an Order. *Cidaris* Leske, 1778. Objective junior synonym of Cidarideae Claus, 1880.

Cystocidaroida Duncan, 1889. Proposed as an Order. See Cystocidaridae Zittel, 1879.

Plesiocidaroida Duncan, 1889. Proposed as an Order. *Tiarechinus* Neumayr, 1881. To be added to *Official List* as an Order.

Diadematoida Duncan, 1889. Proposed as an Order. *Diadema* Gray, 1825. To be added to *Official List* as Superorder Diadematacea and as name of its nominate Order.

Holectypoida Duncan, 1889. Proposed as an Order. *Holectypus* Desor, 1842. To be added to *Official List* as an Order.

Clypeastroida Duncan, 1889. Proposed as an Order. *Clypeaster* Lamarck, 1801. Objective junior synonym of Clypeastridae A. Agassiz, 1873.

Cassiduloidea Duncan, 1889. Proposed as a Suborder. *Cassidulus* Lamarck, 1801. Objective junior synonym of Cassidulidae Claus, 1880.

Spatangoida Duncan, 1889. Proposed as an Order. *Spatangus* Leske, 1778. Objective junior synonym of Spatangidea Claus, 1876.

Streptosomata Duncan, 1889. Proposed as a Suborder. *Echinothuria* S. Woodward, 1863. Objective junior synonym of Echinothuridae Claus, 1880.

Stereosomata Duncan, 1889. Proposed as a Suborder. *Echinus* Linnaeus, 1758. Objective junior synonym of Echinideae Claus, 1880.

Palaeoechinida Perrier, 1893. Proposed as an Order. *Palaechinus* McCoy, 1844. Objective junior synonym of Perischoechinida McCoy, 1849.

Neoechinoidea Perrier, 1893. Proposed as an Order. *Echinus* Linnaeus, 1758. Objective junior synonym of Euechinoidea Bronn, 1860.

Cystechinida or Cystoechinoidea [sic] Haeckel, 1896. Proposed as a Subclass. See *Cystocidaridae* Zittel, 1879.

Promelonaria Haeckel, 1896. Proposed as an Order. *Cystocidaris* Zittel, 1879 (= *Echinocystites* Wyville Thomson, 1861). Objective senior synonym of *Echinocystoida* Jackson, 1912.

Eumelonaria Haeckel, 1896. Proposed as an Order. See *Melonitida* Haeckel, 1866.

Palechinida or Palaeoechinoidea or Perischoechinoidea [sic] Haeckel, 1896. Proposed as a Subclass. *Palaechinus* McCoy, 1844. Objective junior synonyms of *Perischoechinida* McCoy, 1849.

Stenopalmaria Haeckel, 1896. Proposed as an Order. *Bothriocidaris* Eichwald, 1859. Objective junior synonym of *Bothriocidaridae* Zittel, 1879.

Eurypalmaria Haeckel, 1896. Proposed as an Order. *Palaechinus* McCoy, 1844. Objective junior synonym of *Palechinida* Haeckel, 1866.

Desmosticha = Cidaronia [sic] Haeckel, 1896. Proposed as a Legion or Order. *Cidaris* Leske, 1778. Objective junior synonym of *Cidaridae* Claus, 1880.

Cidaridaria Haeckel, 1896. Proposed as an Order or Suborder. *Cidaris* Leske, 1778. Objective junior synonym of *Cidaridae* Claus, 1880.

Diademaria Haeckel, 1896. Proposed as an Order or Suborder. *Diadema* Gray, 1825. Objective junior synonym of *Diadematoida* Duncan, 1889.

Anthosticha = Clypeastronia [sic] Haeckel, 1896. Proposed as a Legion or Order. *Clypeaster* Lamarck, 1801. Objective junior synonyms of *Clypeastridae* A. Agassiz, 1873.

Conoclyparia = Holcotypida [sic] Haeckel, 1896. Proposed as an Order or Suborder. *Holcotypus* Desor, 1842. Objective junior synonyms of *Holcotypoida* Duncan, 1889.

Scutellaria Haeckel, 1896. Proposed as an Order or Suborder. *Scutella* Lamarck, 1816. To be added to *Official List* as Suborder Scutellina.

Petalosticha = Spatangonia [sic] Haeckel, 1896. Proposed as a Tribe or Order. *Spatangus* Leske, 1778. Objective junior synonyms of *Spatangidae* Claus, 1876.

Cassidularia or Cassiduloidea [sic] Haeckel, 1896. Proposed as an Order or Suborder. *Cassidulus* Lamarck, 1801. Objective junior synonyms of *Cassidulidae* Claus, 1880.

Spatangaria Haeckel, 1896. Proposed as an Order or Suborder. *Spatangus* Leske, 1778. Objective junior synonym of *Spatangidae* Claus, 1876.

Palaeo-echinoidea Parker and Haswell, 1897. Proposed as an Order.
Palaechinus McCoy, 1844. Objective junior synonym of Perischoechinida McCoy, 1849.

Calycina Gregory, 1900. Proposed as a Suborder. *Salenia* Gray, 1835. To be added to *Official List* as Suborder.

Diademina Gregory, 1900. Proposed as a Suborder. *Diadema* Gray, 1825. To be added to *Official List* as Suborder.

Arbacia Gregory, 1900. Proposed as a Suborder. *Arbacia* Gray, 1835. To be added to *Official List* as Order-name Arbacioida and as name of its nominate Suborder.

Echinina Gregory, 1900. Proposed as a Suborder. *Echinus* Linnaeus, 1758. To be added to *Official List* as Suborder.

Holectypina Gregory, 1900. Proposed as a Suborder. *Holectypus* Desor, 1842. To be added to *Official List* as Suborder.

Clypeastrina Gregory, 1900. Proposed as a Suborder. *Clypeaster* Lamarck, 1801. To be added to *Official List* as Suborder-name Clypeasterina.

Asternata Gregory, 1900. Proposed as a Suborder. *Cassidulus* Lamarck, 1801. Objective junior synonym of Cassidulidae Claus, 1880.

Sternata Gregory, 1900. Proposed as a Suborder. *Spatangus* Leske, 1778. Objective junior synonym of Spatangidea Claus, 1876.

Gnathostomata Lambert, 1900 (*non* Zittel, 1879). Proposed as a Subclass.
Echinus Linnaeus, 1758. Objective junior synonym of Euechinoidea Bronn, 1860. Homonym of Gnathostomata Zittel, 1879.

Plagiocysta Lambert, 1900. Proposed as an Order. *Echinocystites* Wyville Thomson, 1861. Objective senior synonym of Echinocystoida Jackson, 1912.

Pileatoida Lambert, 1900. Proposed as a Suborder. *Holectypus* Desor, 1842. Objective junior synonym of Holectypoida Duncan, 1889.

Exocysta Lambert, 1900. Proposed as an Order. *Clypeaster* Lamarck, 1801. Objective junior synonym of Clypeastridae A. Agassiz, 1873.

Stereodermata Lambert, 1900. Proposed as an Order. *Echinus* Linnaeus, 1758. Objective junior synonym of Echinidea Claus, 1880.

Echinidia Delage and Hérouard, 1903. Proposed as a Class. *Echinus* Linnaeus, 1758. Objective junior synonym of Echinus Leske, 1778.

Regulariae Delage and Hérouard, 1903. Proposed as a Subclass. *Echinus* Linnaeus, 1758. Objective junior synonym of Endocyclida Bronn, 1860.

Irregulariae Delage and Hérouard, 1903. Proposed as a Subclass. *Spatangus* Leske, 1778. Objective junior synonym of Exocyclida Bronn, 1860.

Echinothurida Delage and Hérouard, 1903. Proposed as an Order. *Echinothuria* S. Woodward, 1863. Objective junior synonym of Echinothurideae Claus, 1880.

Cidarida Delage and Hérouard, 1903. Proposed as an Order. *Cidaris* Leske, 1778. Objective junior synonym of Cidaridae Claus, 1880.

Diademida Delage and Hérouard, 1903. Proposed as an Order. *Diadema* Gray, 1825. Objective junior synonym of Diadematoida Duncan, 1889.

Diademina Delage and Hérouard, 1903. Proposed as a Tribe (below Order). *Diadema* Gray, 1825. Objective junior synonym of Diademina Gregory, 1900.

Salenina Delage and Hérouard, 1903 (as Salelina in Contents). Proposed as a Tribe (below Order). *Salenia* Gray, 1835. Objective junior synonym of Calycina Gregory, 1900.

Cyphosomina Delage and Hérouard, 1903. Proposed as a Tribe (below Order). *Cyphosoma* L. Agassiz, 1838 (*non* Mannerheim, 1837) = *Phymosoma* Haime, 1853. Invalid senior objective synonym of Phymosomina Mortensen, 1904.

Holactypida Delage and Hérouard, 1903. Proposed as an Order. *Holactypus* Desor, 1842. Objective junior synonym of Holactypoida Duncan, 1889.

Clypeastrida Delage and Hérouard, 1903. Proposed as an Order. *Clypeaster* Lamarck, 1801. Objective junior synonym of Clypeastridae A. Agassiz, 1873.

Spatangida Delage and Hérouard, 1903. Proposed as an Order. *Spatangus* Leske, 1778. Objective junior synonym of Spatangidea Claus, 1876.

Endobranchiata Meissner, 1903. Unnamed category "A I" equivalent to Order. *Cidaris* Leske, 1778. Objective junior synonym of Cidaridae Claus, 1880.

Phymosomina Mortensen, 1904. Proposed as a Suborder. *Phymosoma* Haime, 1853. To be added to *Official List* as Order Phymosomatoida.

Protosternata Mortensen, 1907. Proposed as a Suborder. *Collyrites* Desmoulin, 1835. To be added to *Official List*.

Meridosternata Mortensen, 1907. Proposed as a Suborder. *Holaster* L. Agassiz, 1836. To be added to *Official List*.

Amphisternata Mortensen, 1907. Proposed as a Suborder. *Spatangus* Leske, 1778. To be added to *Official List*.

Echinocystoida Jackson, 1912. Proposed as an Order. *Echinocystites* Wyville Thomson, 1861. To be added to *Official List* as Echinocystitoidea (to conform with stem of name of type-genus).

Centrechinoida Jackson, 1912. Proposed as an Order. *Diadema* Gray, 1825.
Objective junior synonym of Diadematoidea Duncan, 1889.

Aulodonta Jackson, 1912. Proposed as a Suborder. *Diadema* Gray, 1825.
Objective junior synonym of Diademina Gregory, 1900.

Stirodonta Jackson, 1912. Proposed as a Suborder. *Phymosoma* Haime,
1853. Objective junior synonym of Phymosomina Mortensen, 1904.

Camarodonta Jackson, 1912. Proposed as a Suborder. *Echinus* Linnaeus,
1758. Objective junior synonym of Echinina Gregory, 1900.

Exocycloida Jackson, 1912. Proposed as an Order. *Spatangus* Leske, 1778.
Objective junior synonym of Exocyclida Brønn, 1860.

Brachygymata Lambert, 1915. Proposed as an Order. *Echinoneus* Leske, 1778,
by monotypy. Objective senior synonym of Echinoneina Clark, 1925.

Globatoroida Lambert, 1915. Proposed as a Suborder. *Echinoneus* Leske,
1778, by monotypy. Objective senior synonym of Echinoneina Clark,
1925.

Nodostomata Lambert, 1915. Proposed as an Order. *Amblypygus* L. Agassiz,
1840, by monotypy. Subjective junior synonym of Cassidulidae
Claus, 1880.

Procassiduloida Lambert, 1918, ex Lambert, 1915, (*nomen nudum*). Proposed
as a Suborder. *Procassidulus* Lambert and Thiéry, 1918. Subjective
junior synonym of Cassidulidae Claus, 1880.

Nucleolitoida Hawkins, 1920. Proposed as an Order. *Nucleolites* Lamarck,
1801. To be added to *Official List*.

Echinoneina H. L. Clark, 1925. Proposed as a Suborder. *Echinoneus* Leske,
1778. To be added to *Official List*.

Melonechinoida Mortensen, 1934. Proposed as an Order. *Palaechinus* McCoy,
1844. Objective junior synonym of Palechinida Haeckel, 1866.

Lepidocentroida Mortensen, 1934. Proposed as an Order. *Echinocystites*
Wyville Thomson, 1861. Objective junior synonym of Echinocystoida
Jackson, 1912.

Pseudoechinoidea Mortensen, 1935. Proposed as a Subclass. *Bothriocidaridae*
Eichwald, 1859. To be added to *Official List*.

Hemicidarina Beurlen, 1937. Proposed as a Suborder. *Hemicidaris* L. Agassiz,
1838. To be added to *Official List* as Order Hemicidaroida.

Megalopoda Macbride and Spencer, 1938. *Eothuria* Macbride and Spencer,
1938, which is not certainly an echinoid.

Aspidodiademina Mortensen, 1939. Proposed as a Suborder. *Aspidodiadema*
A. Agassiz, 1879. To be added to *Official List*.

Pedinina Mortensen, 1939. Proposed as a Suborder. *Pedina* L. Agassiz, 1838.
To be added to *Official List*.

Orthopsina Mortensen, 1942. Proposed as a Suborder. *Orthopsis* Cotteau, 1864. To be added to *Official List*.

Temnopleurina Mortensen, 1942. Proposed as a Suborder. *Temnopleurus* Duncan, 1889. To be added to *Official List* as Order Temnopleuroidea.

Cassidulina Mortensen, 1948. Proposed as a Suborder. *Cassidulus* Lamarck, 1801. Objective junior synonym of Cassidulidae Claus, 1880.

Conoclypina Mortensen, 1948. Proposed as a Suborder. *Conoclypus* L. Agassiz, 1839. To be added to *Official List*.

Laganina Mortensen, 1948. Proposed as a Suborder. *Laganum* Link, 1807. To be added to *Official List*.

Scutellina Durham, 1955. Proposed as a Suborder. *Scutella* Lamarck, 1816. Objective junior synonym of Scutellaria Haeckel, 1896.

Rotulina Durham, 1955. Proposed as a Suborder. *Rotula* Schumacher, 1817. To be added to *Official List*.

Holasteroida Durham and Melville, 1957. Proposed as an Order. *Holaster* L. Agassiz, 1836. To be added to *Official List*.

Alphabetical List of Names in the Order/Class-Group in the Class Echinoidea

Abranchiata Ludwig, 1882	Branchiata Ludwig, 1882
Adelostella T. and T. Austin, 1842	Brachygnota Lambert, 1915
Amphisternata Mortensen, 1907	Calycina Gregory, 1900
Anocysti Parkinson, 1811	Camarodonta Jackson, 1912
Anocysti Fleming, 1828	Cassidularia Haeckel, 1896
Anthosticha Haeckel, 1896	Cassidulidae Claus, 1880
Apomesostomi Parkinson, 1822	Cassidulina Mortensen, 1948
Arbacina Gregory, 1900	Cassiduloidea Duncan, 1889
Aspidodiadema Mortensen, 1939	Catocysti Leske, 1778
Asternata Gregory, 1900	Catocysti Parkinson, 1811
Atelostomata Zittel, 1879	Catocysti Fleming, 1828
Aulodonta Jackson, 1912	Centrechinoida Jackson, 1912
Autechinida Haeckel, 1866	Cidarida Delage and Hérouard, 1903
Bothriocidaridae Zittel, 1879	Cidaridaria Haeckel, 1896
Bothriocidaroida Duncan, 1889	Cidaridea Claus, 1883

Cidaridae Claus, 1880
 Cidaroida Duncan, 1889
 Cidaronia Haeckel, 1896
 Cirrhi-Spinigrada Forbes, 1841
 Clypeastrida Delage and Hérouard, 1903
 Clypeastridae A. Agassiz, 1873
 Clypeastridea Claus, 1876
 Clypeastrina Gregory, 1900
 Clypeastroidea Duncan, 1889
 Clypeastroideia Ludwig, 1886
 Clypeastroideae Claus, 1880
 Clypeastronia Haeckel, 1896
 Columnidae T. and T. Austin, 1842
 Conoclyparia Haeckel, 1896
 Conoclypina Mortensen, 1948
 Cyphosomina Delage and Hérouard, 1903
 Cystechinida Haeckel, 1896
 Cystocidaridae Zittel, 1879
 Cystocidaroida Duncan, 1889
 Cystoehinoidea Haeckel, 1896
 Desmosticha Haeckel, 1866
 Diademaria Haeckel, 1896
 Diadematoida Duncan, 1889
 Diademida Delage and Hérouard, 1903
 Diademina Gregory, 1900
 Echinata Fischer de Waldheim, 1823
 Echini Goldfuss, 1820
 Echinida Fleming, 1822
 Echinidae Fleming, 1828
 Echinidae T. and T. Austin, 1842
 Echinidea Blainville, 1834
 Echinidea Haeckel, 1896
 Echinideae Claus, 1880
 Echinides Stark, 1828
 Echinidia Delage and Hérouard, 1903
 Echinina Gregory, 1900
 Echinocystoida Jackson, 1912
 Echinoderma Latreille, 1825
 Echinodermata Leske, 1778
 Echinodermata Wad, 1803
 Echinodermia Rafinesque, 1815
 Echinoida Latreille, 1825
 Echinoidea d'Orbigny, 1842
 Echinoneina H. L. Clark, 1925
 Echinothurida Delage and Hérouard, 1903
 Echinothurideae Claus, 1880
 Echinus Leske, 1778
 Ectobranchiata Ludwig, 1886
 Emesostomi Parkinson, 1822
 Endobranchiata Meissner, 1903
 Endocyclica Bronn, 1860
 Entobranchiata Ludwig, 1886
 Eocidarida Haeckel, 1866
 Euehinoidea Bronn, 1860
 Eumelonaria Haeckel, 1896
 Eurypalmaria Haeckel, 1896
 Exocyclica Bronn, 1860
 Exocycloida Jackson, 1912
 Exocysta Lambert, 1900
 Globatoroida Lambert, 1915
 Gnathostomata Zittel, 1879
 Gnathostomata Lambert, 1900
 (*non* Zittel, 1879)
 Hemicidarina Beurlen, 1937
 Holasteroida Durham and Melville, 1957
 Holocryptida Haeckel, 1896
 Holocryptida Delage and Hérouard, 1903

Holocotypina Gregory, 1900
Holocypoida Duncan, 1889
Irregulares Zittel, 1879
Irregularia Carus, 1863
Irregulariae Delage and Hérouard, 1903
Laganina Mortensen, 1948
Lepidocentroidea Mortensen, 1934
Megalopoda MacBride and Spencer, 1938
Melonechinoida Mortensen, 1934
Melonitida Haeckel, 1866
Meridosternata Mortensen, 1907
Neoechinoidea Perrier, 1893
Nodostomata Lambert, 1915
Nucleolitoida Hawkins, 1920
Orthopsina Mortensen, 1942
Palaeoechinida Perrier, 1893
Palaeo-echinoidea Parker and Haswell, 1897
Palechinida Haeckel, 1866
Palechinida or Palaeoechinoidea or Perischoechinoidea Haeckel, 1896
Palechinoida Zittel, 1879
Pedicellata Griffith and Pidgeon, 1834
Pedinina Mortensen, 1939
Perischoechinida McCoy, 1849
Perischoechinidae Zittel, 1879
Perischoechinoidea Bronn, 1860
Petalosticha Haeckel, 1866
Phymosomina Mortensen, 1904
Pileatoida Lambert, 1900
Plagiocysta Lambert, 1900
Plesiocidaroida Duncan, 1889
Pleurocysti Leske, 1778
Pleurocysti Parkinson, 1811
Pleurocysti Fleming, 1828
Procassiduloida Lambert, 1918
Promelonaria Haeckel, 1896
Protosternata Mortensen, 1907
Pseudoechinoidea Mortensen, 1935
Radiaria Rafinesque, 1815
Regulares Zittel, 1879
Regularia Carus, 1863
Regulariae Delage and Hérouard, 1903
Rotulina Durham, 1955
Saleolina Delage and Hérouard, 1903
Salenina Delage and Hérouard, 1903
Scutellaria Haeckel, 1896
Scutellina Durham, 1955
Spatangaria Haeckel, 1896
Spatangida Delage and Hérouard, 1903
Spatangidea Claus, 1876
Spatangidae Claus, 1880
Spatangoidea Duncan, 1889
Spatangoidea Ludwig, 1886
Spatangoidea Duncan, 1889
Spatangoideae Claus, 1880
Spatangonia Haeckel, 1896
Stenopalmaria Haeckel, 1896
Stereodermata Lambert, 1900
Stereosomata Duncan, 1889
Sternata Gregory, 1900
Stirotonta Jackson, 1912
Streptosomata Duncan, 1889
Temnopleurina Mortensen, 1942
Typica Carus, 1863

Available Names in the Order/Class-Group in Echinoidea
Class

Echinoidea Leske, 1778 (as *Echinus*). Objective junior synonyms *Echini* Goldfuss, 1820, *Echinida* Fleming, 1822, *Echinata* Fischer von Waldheim, 1823, *Echinoida* Latreille, 1825, *Echinidae* Fleming, 1828, *Echinides* Stark, 1828, *Echinidea* Blainville, 1834, *Cirrhi-Spinigrada* Forbes, 1841, *Adelostella* T. and T. Austin, 1842, *Echinoidea* d'Orbigny, 1852, *Echinidia* Delage and Hérouard, 1903.

Subclass

Endocyclica Bronn, 1860. Objective junior synonyms *Regularia* Carus, 1863, *Desmosticha* Haeckel, 1866, *Regulares* Zittel, 1879, *Regulariae* Delage and Hérouard, 1903.

Euechinoidea Bronn, 1860. Objective senior synonym, *Echinidae* T. and T. Austin, 1842. Objective junior synonyms *Typica* Carus, 1863, *Autechinida* Haeckel, 1866, *Neoechinoidea* Perrier, 1893, *Gnathostomata* Lambert, 1900 (*non* Zittel, 1879).

Exocyclica Bronn, 1860. Objective junior synonyms *Irregularia* Carus, 1863, *Petalosticha* Haeckel, 1866, *Irregulares* Zittel, 1879, *Irregulariae* Delage and Hérouard, 1903, *Exocycloida* Jackson, 1912.

Perischoechinoidea McCoy, 1849 (as *Perischoechinida*). Objective junior synonyms *Perischoechinoidea* Bronn, 1860, *Paleochinoidea* Zittel, 1879, *Palaeoechinida* Perrier, 1893, "Palechinida or Palaeoechinoidea or Perischoechinoidea" Haeckel, 1896.

Pseudoechinoidea Mortensen, 1935.

Superorder

Atelostomata Zittel, 1879

Diadematacea Duncan, 1889 (as *Diadematoida*)

Echinacea Claus, 1880 (as *Echinideae*)

Gnathostomata Zittel, 1879.

Order

Arbacioida Gregory, 1900.

Bothriocidaroida Zittel, 1879 (as *Bothriocidaridae*). Objective junior synonyms *Bothriocidaroida* Duncan, 1889, *Stenopalmaria* Haeckel, 1896.

Cassiduloida Claus, 1880 (as *Cassidulidae*). Objective junior synonyms
Cassiduloidea Duncan, 1889, *Cassidularia* Haeckel, 1896, *Asternata*
Gregory, 1900, *Procassiduloida* Lambert and Thiéry, 1921; subjective
junior synonym *Nodostomata* Lambert, 1915.

Cidaroida Claus, 1880 (as *Cidaridae*). Objective senior synonyms *Anocysti*
Parkinson, 1822 and *Fleming*, 1828, *Emmesostomi* Parkinson, 1822;
objective junior synonyms *Abranchiata* Ludwig, 1882, *Cidaridea* Claus,
1883, *Entobranchiata* Ludwig, 1886, *Cidaroida* Duncan, 1889, *Desmosticha*
Haeckel, 1896, *Cidaronia* Haeckel, 1896, *Cidaridaria* Haeckel,
1896, *Cidarida* Delage and Hérouard, 1903, *Endobranchiata* Meissner,
1903.

Clypeasteroida A. Agassiz, 1873 (as *Clypeastridae*). Subjective senior synonyms
Catocysti Leske, 1778, Parkinson, 1811 and *Fleming*, 1828; objective
junior synonyms *Clypeastridea* Claus, 1876, *Clypeastroideae* Claus, 1880,
Clypeastroidea Ludwig, 1882, *Clypeastroida* Duncan, 1889, *Anthosticha*
Haeckel, 1896, *Clypeastronia* Haeckel, 1896, *Exocysta* Lambert, 1900,
Clypeastrida Delage and Hérouard, 1903.

Diadematoida Duncan, 1889. Objective junior synonyms *Diademaria* Haeckel,
1896, *Diademida* Delage and Hérouard, 1903, *Centrechinoida* Jackson,
1912.

Echinocystitoida Jackson, 1912 (as *Echinocystoidea*). Objective senior synonyms
Cystocidaridae Zittel, 1879, *Cystocidaroida* Duncan, 1889, *Promelonaria*
Haeckel, 1896, *Cystechinida*-*Cystoechinoidea* Haeckel, 1896, *Plagiocysta*
Lambert, 1900; Objective junior synonym *Lepidocentroidea* Mortensen,
1934.

Echinoida Claus, 1880 (as *Echinidae*). Objective junior synonyms *Branchiata*
Ludwig, 1882, *Ectobranchiata* Ludwig, 1886, *Stereosomata* Duncan,
1889, *Stereodermata* Lambert, 1900.

Echinothurioida Claus, 1880 (as *Echinothuridae*). Objective junior synonyms
Streptosomata Duncan, 1889, *Echinothurida* Delage and Hérouard, 1903.

Hemicidaroida Beurlen, 1937.

Holasteroida Durham and Melville, 1957.

Holectypoida Duncan, 1889. Objective junior synonyms *Conoclyparia* Haeckel,
1896, *Holectypida* Delage and Hérouard, 1903, *Pileatoida* Lambert,
1900; Subjective junior synonyms *Brachygnata* Lambert, 1915,
Globatoroida Lambert and Thiéry, 1921.

Megalopoda MacBride and Spencer, 1938.

Nucleolitoida Hawkins, 1920.

Palaechinoida Haeckel, 1866 (as *Paleehinida*). Objective junior synonyms *Eocidarida* Haeckel, 1866, *Perischoechinidae* Zittel, 1879, *Eurypalmaria* Haeckel, 1896, *Palaeo-echinoidea* Parker and Haswell, 1897, *Melon-echinoida* Mortensen, 1934.

Phymosomatoida Mortensen, 1904 (as *Phymosomina*). Objective senior synonym *Cyphosomina* Delage and Hérouard, 1903; objective junior synonym *Stirodonta* Jackson, 1912.

Plesioeidaroidea Duncan, 1889.

Spatangoidea Claus, 1876 (as *Spatangidea*). Objective senior synonyms *Pleurocysti* Leske, 1778, Parkinson, 1811, Fleming, 1828, *Apomesostomi* Parkinson, 1822; objective junior synonyms *Spatangideae* Claus, 1880, *Spatangoideae* Claus, 1880, *Spatangoidea* Duncan, 1889, *Petalosticha* Haeckel, 1896, *Spatangonia* Haeckel, 1896, *Spatangaria* Haeckel, 1896, *Sternata* Gregory, 1900, *Spatangida* Delage and Hérouard, 1903.

Tennnopleuroidea Mortensen, 1942.

Suborder

Amphisternata Mortensen, 1937.

Aspidodiadema Mortensen, 1939.

Calycina Gregory, 1900. Objective junior synonym *Salenina* ("Salelina") Delage and Hérouard, 1903.

Cassidulina *sensu stricto* (Mortensen, 1948).

Clypeasterina *sensu stricto* (Gregory, 1900, as *Clypeastrina*).

Conoclypina Mortensen, 1948.

Diademina *sensu stricto* (Gregory, 1900). Objective junior synonym *Aulodonta* Jackson, 1912.

Echinina *sensu stricto* (Gregory, 1900). Objective junior synonym *Camarodonta* Jackson, 1912.

Echinoneina H. L. Clark, 1925. Objective senior synonyms *Brachygynata* Lambert, 1915, *Globatoroida* Lambert, 1915.

Holeptypina *sensu stricto* (Gregory, 1900).

Laganina Mortensen, 1948.

Meridosternata Mortensen, 1907.

Orthopsina Mortensen, 1942.

Pedinina Mortensen, 1939.

Protosternata Mortensen, 1907.

Rotulina Durham, 1955.

Scutellina Haeckel, 1896 (as Scutellaria).

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